RabbitMQ

This intensive three day, instructor-led course in RabbitMQ provides a deep dive into how to install, configure, and develop applications which leverage RabbitMQ messaging. The course begins with RabbitMQ installation and general configuration. It continues with developing messaging applications using the Java APIs, and delves into more advanced topics including clustering, high availability, performance, and security. Modules are accompanied by lab exercises that provide hands-on experience.

PIVOTAL TRAINING APPROACH

At the end of the course, you should be able to do the following:

- Install and configure RabbitMQ
- Activate and use plugins such as the web management console
- Implement messaging patterns and applications using the Java client
- Set up a cluster of RabbitMQ nodes
- Configure high availability appropriately
- Tune and optimize RabbitMQ for better performance
- Secure RabbitMQ

SKU
EDU-1099

DELIVERY METHODS
Instructor-led
Live-online
On-site training

DURATION
Three days of instructor-led training
50% lecture, 50% hands-on lab

PREREQUISITES
Knowledge on Core Java or any enterprise programming language

TARGET AUDIENCE
Developers
Architects
Administrators

MORE INFORMATION
On-site training is also available for customers who prefer to bring a Pivotal Certified Instructor to their own facilities. For more information about on-site classes, contact us at pivotal.io/training/contact.
COURSE MODULES

INTRODUCTION TO MESSAGING AND AMQP
- Benefits of messaging and asynchronous systems
- Why JMS isn’t enough
- Introduction to AMQP
- RabbitMQ case studies

RABBITMQ INSTALLATION
- Product description and main capabilities
- Installation, directory structure, and configuration
- Durability with the Mnesia database
- Basic administration
- Web management console
- Multitenancy with virtual hosts
- Logging with the firehose tracer

DEVELOPMENT AND INTEGRATION
- Clients (Java, C#, Python, Ruby, etc.)
- Focus on the Java client
- Publishing and consuming messages
- Managing AMQP resources
- AMQP routing with exchanges and queues
- Higher level abstractions (Spring AMQP & Integration, Pika)
- Messaging patterns

RELIABLE MESSAGING DEVELOPMENT
- Durable queues and exchanges
- Persistent messages
- AMQP and JMS transactions
- AMQP acknowledgments
- Dead lettering
- Multiple transactional resources

CLUSTERING
- Scalable messaging architecture through clustering
- Creating a cluster
- Disk vs. RAM nodes
- Administration of a cluster
- Network partitions

HIGH AVAILABILITY
- Cluster node failures and consequences
- Mirrored queues
- Slave synchronization
- Client failover handling

PLUGINS
- RabbitMQ plugins introduction
- LDAP authentication
- Shovel
- Federation
- Shovel vs federation
- STOMP

PERFORMANCE
- Impacts of configuration and client code options on performance
- Flow control
- Best practices

SECURITY
- Virtual hosts, users, and access control
- Authentication
- Secured communication

OPERATIONS AND MONITORING
- Disk, firewall, heartbeat tuning
- Monitoring
- Management API
- Support for third-party monitoring tools

SPRING AMQP (OPTIONAL)
- Introduction to Spring
- Spring AMQP overview
- Spring’s AMQP template
- Configuring AMQP Resources using Spring
- Sending and receiving messages
TERMS AND CONDITIONS
By procuring these services, Customer agrees that the terms and conditions set forth here: https://pivotal.io/training/terms are incorporated by reference into this Training Brief and shall govern the provision of Pivotal’s Services herein, unless Customer has a signed applicable agreement with Pivotal.

You may not record the training in any medium, nor may you reproduce, copy, or distribute any Course Materials provided pursuant to or in conjunction with the Training Services. Pivotal will determine the personnel assigned to perform the Training Services.

INSTRUCTOR-LED TRAINING
Delivery. These courses may be delivered in-person or online, and can be purchased pursuant to a Purchase Order Cancellation Policy.

By Pivotal. Pivotal reserves the right to cancel or reschedule any instructor-led class. If a cancellation or reschedule is necessary, Pivotal will make every effort to notify you at least 10 business days in advance. Unfortunately, last-minute cancellations and rescheduling sometimes require this notification period to be less than 10 business days. Please consider this when making your travel plans. Pivotal will not, in any way, be held responsible for any costs, including loss of airfare or other transportation costs, hotel expenses, or other damages that you may incur in the event that Pivotal cancels or reschedules a class. Pivotal will refund the tuition fee only.

By You. Instructor-led private training course fees are 100% refundable if Pivotal receives written notice of cancellation at least 10 business days prior to the start date of the class. If notice is received within 1-9 days prior to the start date, 50% of the registration fees will be refunded. A refund will not be issued if notice is received on the course start date. Cancellations must be submitted in writing to education@pivotal.io. Private course attendees may transfer their enrollment with written consent by Pivotal by contacting education@pivotal.io.

Expiration Policy. Instructor-led public training course entitlement expires within 12 months from date of purchase (if purchased online), or 12 months from date of invoice (if purchased pursuant to a Purchase Order), after which You will not be entitled to a refund.

BUSINESS HOURS
Training Services shall be performed by Pivotal from 9:00 A.M. until 5:00 P.M. in the local time zone where the Training Services are being performed by Pivotal, Monday through Friday excluding local statutory holidays (for example, within the State of California for Pivotal’s US employees), and any additional holidays that Pivotal grants to its employees, a list of which can be provided by Pivotal to you prior to the commencement of Training Services.